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ABSTRACT

Despite prestigious reports, most notably "A Nation at Risk," and fervent reform efforts, school performance is unlikely to be improved by measures failing to recognize that schools are institutions--complex organizations composed of interdependent parts, governed by well-established rules and norms, and adapted for stability. Effective schools cannot flourish unless superintendents, school boards, and other outside authorities delegate meaningful control over school policy, personnel, and practice to the schools themselves. High school performance gains will require basic changes in school governance and organization--changes threatening the security of political representatives and administrators heavily invested in the existing system. This study developed a comprehensive database to explore these issues. The database supplements a national survey and testing of 25,000 students in 1,000 public and private high schools (the High School and Beyond Study) with a survey of teachers and principals in a representative sample of half the schools. This supplement, the Administrator and Teacher Survey, was designed to measure elements of school organization related to school effectiveness. High- and low-performance schools were found to differ dramatically in their student bodies and informal organization. Students from high-performance schools were typically Caucasian and from well-educated, affluent families. Leadership was stronger in high-achievement schools; staff shared a commitment to academic excellence and worked as a team to create a more productive learning environment. A multiple regression technique proved that school organization significantly affected learning. The closing discussion explores ways to free schools from governmental and other controls. (MLH)

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THE DILEMMA OF PUBLIC SCHOOL IMPROVEMENT

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The Dilemma of Public School Improvement

In the early 1980s Americans awoke to discover that their public schools were failing them. Student test scores, declining for nearly two decades, showed America trailing the rest of the world's democracies in mathematics and science achievement. Young people were dropping out of high school at rates that had not changed since the mid-1960s. The public had lost faith in its schools, and, enduring the worst economic recession since the 1930s, worried whether the nation possessed the intellectual talent to revitalize its industries and compete with the technological sophistication of East Asia. A flurry of prestigious reports, most notably A Nation at Risk, validated and perhaps even inflated these fears.

The rising concern and pressure on all levels of government crested in a tidal wave of educational reform legislation as the states cracked down on student underachievement.[1] They increased graduation requirements and required regular testing, imposed sanctions for poor performance and mandated more learning time. They got tough with teachers, strengthening certification processes, instituting competency testing, and elaborating teacher evaluation systems. They also sharply boosted education spending and rewarded teachers with salary increases surpassing those of every

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This paper was originally presented at Dartmouth College on May 4, 1987 as part of its Spoor Dialogues on Leadership. The comments of the panelists, especially U.S. Assistant Secretary of Education Chester Finn, and later of Brookings colleagues, Robert Katzmann, Jim Schneider and Steve Smith, were helpful in revising it.

1. Thorough summaries of recent state education reform are available in Denis P. Doyle and Terry W. Hartle, Excellence in Education: The States Take Charge (Washington, D.C.: American Enterprise Institute, 1985); and William Chance, "...the best of educations...: Reforming America's Schools in the 1980s, (Chicago: The MacArthur Foundation, 1986).

occupational group in the country. And today "competitiveness," a central theme of those who aspire to succeed Ronald Reagan, keeps enthusiasm for improvement high and raises the additional prospect of federal efforts to supplement the state reforms.

The effects of all this activity cannot yet confidently be judged, but there is reason to believe the reforms will fall far short of their goals--and perhaps even prove counterproductive. Simply put, the premises supporting the reforms may be wrong about what causes poor student performance. That, at any rate, is the conclusion emerging from a national study of American high schools in which I have been engaged with Professor Terry M. Moe of Stanford University.[2]

From our perspective, school performance is unlikely to be significantly improved by any measure or set of measures that fails to recognize that schools are institutions--complex organizations composed of interdependent parts, governed by well-established rules and norms of behavior, and adapted for stability. Their influence on learning does not depend on any particular educational practice, on how they test or assign homework or evaluate teaching, but rather on their organization as a whole, on their goals, leadership, followership, and climate. What is more, their institutional structure and character is shaped by their environments--by their relationships with parents, of course, but more pertinently, by the way they are controlled, by their connections to administrative and political superiors. Those organizational qualities that we, and many

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2. The details of the analysis discussed in this article and a thorough treatment of our subject more broadly defined can be found in John E. Chubb and Terry M. Moe, Politics, Markets and School Performance (Washington, D.C.: The Brookings Institution, Forthcoming), which is scheduled for publication in the summer of 1988.

others,[3] consider to be essential ingredients of an effective school--such things as academically focused objectives, pedagogically strong principals, relatively autonomous teachers, and collegial staff relations--do not flourish without the willingness of superintendents, school boards, and other outside authorities to delegate meaningful control over school policy, personnel, and practice to the school itself. Efforts to improve the performance of schools without changing the way they are organized or the controls they respond to will therefore probably meet with no more than modest success, and are even more likely to be undone.

This unfortunately poses a dilemma for improving the performance of public high schools. Significant gains in student achievement may well require basic changes in the ways schools are governed and organized--in the authority entrusted to them, the objectives imposed upon them, and the professional discretion they are permitted to employ. Such changes would, however, threaten the security of political representatives and education administrators whose positions are tied to the existing system and who now hold the reins of school reform. The power to hire and fire, to develop curricula, to select instructional methods and materials, and to set most policy for students and teachers is now vested mainly in elected officials, political appointees, and civil servants whose responsibilities would be radically changed and likely reduced under alternative systems of control.

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3. The large literature on "effective schools" that underscores these qualities includes most importantly Michael Rutter, B. Maughan, P. Mortimore, J. Ouston and A. Smith, Fifteen Thousand Hours: Secondary Schools and their Effects on Children (Cambridge: Harvard University Press, 1979); Wilbur B. Brookover, Charles Beady, Patricia Flood, John Schweitzer, and Joe Wisenbaker, School Social Systems and Student Achievement: Schools Can Make a Difference (New York: Praeger, 1979); John I. Goodlad A Place Called School: Prospects for the Future (New York: McGraw Hill, 1984); and Arthur G. Powell, Eleanor Ferrar and David K. Cohen, The Shopping Mall High School: Winners and Losers in the Educational Marketplace (New York: Houghton Mifflin, 1985).

and who are sufficiently well positioned in local and state politics to prevent their enactment. The reforms that may be the most promising are therefore the ones least likely to be adopted. Indeed, the current wave of education reform has left the organization and governance of public schools pretty much intact.

If we are to overcome this dilemma, the nation may need to demand basic changes in the way public education is financed and run. That, of course, is a high hurdle. But whether it can or cannot be cleared, the nation must understand how tightly school performance may be bound up with school organization and control, for those ties bear directly on the promise of school reform however it is pursued.

A National Study of High Schools

For years school performance stood as one of the most puzzling issues in education research. In the mid-1960s the largest study of American schools conducted to that time, the so-called Coleman Report, concluded that schools per se accounted for little of the nationwide variation in student achievement. Subsequent research--most notably Christopher Jencks' Inequality--found that the outcomes of education were largely independent of factors that by economic logic, not to mention common sense, ought to influence their production. And, the experience of public education throughout the 1970s appeared to bear these conclusions out. While real school expenditures, the educational attainment of teachers, class sizes, and other assumed influences on student achievement improved substantially, test scores steadily declined. Student performance could not be tied closely to anything in particular that schools did. Instead, it appeared to depend mostly on parental and peer influences beyond a school's control.

Among the many reasons that poor student performance remained so puzzling is that researchers did not have quite the right data to study it. They had excellent information about student achievement and at least adequate measures of student background. But their measures of school quality, while highly reliable, mostly captured what was easy to quantify--expenditures, number of course offerings, teacher backgrounds--things that turned out to have little systematic bearing on student achievement.[4] They did not describe those aspects of school organization--goals, leadership, collegiality, ethos--that subsequent case studies began to identify, time and again, as "predictors" of school effectiveness.[5] Through systematic surveys such as the one reported in A Place Called School, UCLA Education School Dean John Goodlad's pathbreaking effort to characterize schools as "total entities," researchers are gaining confidence that school organization may hold the key to the puzzle of school performance. But researchers do not yet have a data base that combines high-quality information on school organization and the background and achievement of the students in them for a representative sample of the nation's high schools.

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4. The extensive and ultimately frustrating efforts, mostly of economists, to explain school outputs, i.e., student achievement, with such intuitively appealing school inputs are critically summarized in Eric A. Hanushek, "The Economics of Schooling," The Journal of Economic Literature, 24, 3 (September 1986):1141-1177. Less frustration has been encountered in analyses of the most recent data sets of this kind, including most importantly, the unsupplemented version of High School and Beyond. But even the best of this work--James S. Coleman, Thomas Hoffer and Sally Kilgore, High School Achievement (New York: Basic Books, 1982); and James S. Coleman and Thomas Hoffer, Public and Private High Schools (New York: Basic Books, 1987)--has been criticized for its inability to flesh out the school attributes that account for superior achievement.

5. The best overview of this voluminous literature remains Stewart C. Purkey and Marshall Smith, "Effective Schools: A Review," The Elementary School Journal, (1983):427-452.

The data base assembled for our study is the result of the first attempt, to our knowledge, to create one. It supplements an early 1980s national survey and testing of 25,000 students in 1,000 public and private high schools--the High School and Beyond study--with a survey of the principals and teachers (30 per school) in a representative sample of half the schools. The supplement, the Administrator and Teacher Survey, was designed by us and a team of education researchers to measure especially those elements of school organization stressed in field research on school effectiveness. The integrated data set provides reliable and generalizable information on a full range of considerations pertinent to an understanding of school performance, from the influence of the school environment to the organization and operation of the school itself to the backgrounds and achievement of the students.

What Do Effective Schools Look Like?

Before considering how effective schools come into being, or could be brought about, it is important to know what sort of organization we are talking about. To begin with, we are trying to understand schools that are effective in a particular but preeminently important sense: schools that excel in promoting academic achievement. Of course, schools serve other valuable purposes--socializing young people into our civic culture, preparing the less academically inclined for specific occupations--and a reasonable argument can be made that those purposes ought to be pursued even if they compete with academic achievement. Still, if one standard must be chosen, and for analytical tractability one must be, observers agree that academic achievement stands out as the standard that all schools, regardless of orientation, must give high priority. A profile of

the types of schools that are particularly effective or ineffective at promoting academic achievement is thus in order.

To measure achievement, students were administered a battery of tests in the spring of their sophomore year and again at the end of their senior year. After adjusting the gains (or losses) registered in the two years for factors that could bias the measurement of actual learning--guessing, unequal difficulty of questions, and others--the scores were aggregated into three achievement measures: verbal, composed of reading, vocabulary, and writing; quantitative, composed of math and science; and total achievement. These measures were then averaged across the students in each school to create school-level indicators of academic performance. Schools in the highest quartile of achievement scores were identified as "high-performance" schools and those in the bottom quartile "low-performance," with separate designations made for each of the three composite measures. The schools were then profiled on the basis of four characteristics--formal structure, informal organization, classroom practice, and student bodies--that figure regularly in explanations of their performance.

Applying conventional standards for judging statistically significant differences, ones that by chance would occur no more than 5 percent of the time, we found that high-performance and low-performance schools are similar in formal structure. They are essentially the same size, with 200 students in each grade. The ratio of students to teachers in each is fourteen or fifteen to one. Teachers receive the same minimum and maximum salaries, and about one-fourth of the faculty in each has more than ten years of service in the same school, that is, the respective staffs are equally stable and experienced. In fact, other than in those matters that legally distinguish public and private high schools--for example, admission requirements, tuition, and to some degree unionization--the formal

arrangements of high- and low-performance high schools, public and private alike, differed significantly in only two respects.[6] The graduation requirements in high-performance schools were slightly more strict than the national average and those of low-performance schools slightly less strict. The top-scoring schools also had twice as many students in an academic track of coursework (64 percent) as the low-scoring schools (29 percent).

A look at classroom practices turned up more differences, but the two types of schools were hardly distinct. Top-scoring schools assign a few more minutes of homework, exercise more effective discipline, and operate somewhat less routinized and bureaucratic classrooms. Yet classes in both are subject to similar amounts of disruption by messengers, P.A. announcements, students coming in tardy, noise in the hallways, and fooling around. And writing, one of the most important skills schools can develop, is required no more frequently in high-performance schools than in low-performance ones. These results generally confirm the impressions of qualitative studies such as The Shopping Mall High School: from good schools to bad, classroom activities evidence a predictable--and disappointing--sameness.

High- and low-scoring schools are not difficult to distinguish, however, for they differ dramatically in their student bodies and their informal organization. The differences in student bodies are no surprise. Students in the top schools have parents with significantly greater incomes, higher occupational status, and more years of education--one and a half years on average. Much smaller portions of student bodies in high-performance schools are black--5 percent as opposed to 21 percent--and

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6. Formal and informal differences between public and private high schools are reviewed in John E. Chubb and Terry M. Moe, "No School is an Island: Politics, Markets and Education," The Brookings Review, 4, 4 (Fall 1986):21-28.

disadvantaged--8 percent as opposed to 24 percent. In their homes, students from high-achievement schools have the benefit of more educational tools such as encyclopedias, books, and calculators, and their parents expect more of them to go to college. Predictably, schools with superior academic performance contain students that on average possess well-known personal advantages.

Much less predictably, though, schools at the top have strikingly superior organizations. To begin with, they have very different goals. Schools with the largest gains in student achievement place much more emphasis on academic excellence as opposed to "the basics," occupational skills, or good work habits. Their goals are also clearer: their staffs are more likely to agree on priorities such as the mastery of subject matter and the development of student self-esteem and efficacy. In a word, they are more likely to perceive the school as having a mission. Leadership is helpful in this regard, and it too distinguishes the organizations that achieve the most. Principals in the top schools are less likely to have accepted the job to escape teaching and take up management, and less interested in using the job as a stepping stone to higher administrative office. They are also more successful in gaining their teachers' confidence. Overall it can fairly be said that leadership in high-performing schools is more pedagogical and less managerial than in low-performing ones.

Leadership is also significantly stronger. Teachers in the top schools regard their principals as more forceful leaders in both the general sense of holding, communicating, and effectively pursuing a vision of what the school should accomplish and in the more specialized sense of showing teachers how they can contribute to that cause through their instruction. This leadership style is not, however, authoritarian. In

high-performance schools, decisionmaking is significantly more democratic, the teachers more involved and influential in establishing disciplinary codes, selecting text books, designing curricula, and even choosing their colleagues than teachers in low-performance schools. And relationships between teachers and principals are altogether more cooperative.

Authority is also more likely to be delegated to the classroom. Teachers not only believe they have more power to help determine schoolwide policy but also that they have greater control of what they teach, how they teach, and how they maintain discipline in their classrooms. Alongside this autonomy, teachers in the achieving schools seem to work more effectively with each other. They are more knowledgeable about one another's students and course materials; they are more helpful to one another; they are better colleagues. In the words of the survey, they are more likely to agree that they "can count on most staff members to help out anywhere, anytime"; ultimately "the school seems like a big family." It should come as no surprise then that teachers in the top schools feel more effective and more satisfied with their jobs.

Taken together, these organizational contrasts call to mind the distinction that might be drawn more generally between teams and hierarchies. Both types of organizations depend for their success on the coordinated efforts of their individual members. In a hierarchy this tends to be accomplished through the use, often extensive, of rules and monitoring. Members of the hierarchy are placed in regulated and supervised positions such that the organization will prosper even if the individual holds interests and objectives that are selfish or inconsistent with those of the organization. On a team there is far less reliance on formal arrangements; members tend to cooperate and make effective contributions because they share, often as a condition of their

recruitment, a strong interest in the organization's objectives. This is not to say that "teams" in the real world eschew formalism altogether or that "hierarchies" do not exploit some of the kindred spirit found on teams. But to the extent that organizations tend to look more like one of these types than the other, the distinction can be useful in interpreting their behavior.

This appears to be true for schools. Research on school effectiveness points increasingly to the importance of the very qualities that we have characterized as those of a team. In part this is because students seem to profit from the overall learning climate that derives from school staffs that share a commitment to academic excellence and reinforce one another's efforts in their respective jobs. It is also because teaching is evidently more effective when it is guided more by the competent professional judgment of the teacher, as in a teamlike organization, and less by detailed prescriptions of curricula and instructional methods, as in a hierarchy. This is why so much of the recent discussion of school reforms and some of the most prominent reports on school improvement, most notably the Carnegie Forum's A Nation Prepared: Teachers for the 21st Century, emphasize the professionalization of teaching and the delegation of greater authority to the most competent teachers.

Does the Organization of Schools Really Matter?

High- and low-performance schools might of course differ in their structure and operation without those differences having any direct effect on student achievement. Differences in student aptitude or parental support could account for any of that variation and, for that matter, variation in school organization as well. Before examining how schools

become organized, though, it would be well to establish that organization makes a difference for academic achievement in the first place.

To help in interpreting the impact of schooling and other educational influences on student achievement, it is important to appreciate the great disparities in test scores among American schools. A convenient way to do that is to employ as baselines the national averages of the gains made by the schools in verbal, quantitative, and total achievement. Since those gains are registered over a two-year period, one-half of the average gains can be considered the standard amounts of learning in one year of high school. By this standard, the sophomore to senior year differences in achievement between high- and low-performance schools are roughly two years in verbal skills, nearly four years in quantitative skills, and more than two years overall. For instance, during the final two years of high school a student at a low-performance school would be expected to gain only one grade equivalent in total achievement while a student in a high-performance school would be expected to gain three. This two-year disparity in overall performance between schools in the bottom quartile and those in the top will provide a point of reference as we try to account for student achievement across all of the schools in the sample.

If schooling is to be accepted as explaining much of this disparity, other prominent influences on achievement such as student aptitude, parental support, and peer pressure have to be shown as unable to account for it. Each influence can be readily measured with indicators in the High School and Beyond survey and was included in our analysis: student aptitude was measured by tenth grade test scores; parental support for learning by an index of parents' income, education, occupational status, and possessions; and peer pressure, through which a student may be encouraged to excel or discouraged from even caring to try, by an average of the family background scores of the students in each school.

The attributes of schools themselves were represented in two categories. The first, school resources, included measures of physical characteristics of the school--per pupil expenditures, average salaries of teachers, school size, and student-teacher ratios--objective attributes that are commonly regarded as key school "inputs." The second category, school organization, included the full range of school qualities, more subjective in nature and focusing more on school "processes," that together distinguish hierarchies from teams and, in our view (and that of others), ineffective schools from effective ones. These attributes include all those elements of informal organization--for example, school mission and staff relations--and classroom practice--for example, the amount of homework assigned--that were discussed in the profiles of high- and low-performance schools. In addition, they include two measures of formal structure--graduation requirements and the percentage of students on academic tracks--that indicate the degree to which schools are academically oriented. The indicators in each category were then standardized and aggregated into indexes of school resources and school organization.

So, how does schooling compare with other influences on student achievement? Very favorably. When the effects of the two measures of school quality are analyzed in conjunction with those of the three other influences on academic achievement--the student's aptitude, family, and peers--school organization emerges as having the second largest impact on total test score gains, trailing only the proxy for student aptitude. In importance it leads parental influence by a little, and school resources and peer pressure by a lot.

The analysis that supports this conclusion employed a standard statistical procedure, multiple regression, to estimate the relative strengths of the relationships between each explanatory variable and

student achievement when all of the variables come into play at the same time. This makes it possible, for example, to avoid giving high-performance schools credit for the superior achievement of their students when the key influence may be that of parents. And, it makes it possible to compare the unique contributions of many otherwise difficult-to-entangle influences. Our comparisons are based on the improvement in student achievement that the regression estimates predict would occur if a student were to jump from the middle of the lowest quartile on one of the explanatory variables to the middle of the upper quartile while not moving at all on any of the other variables. If a student hypothetically made this much of an improvement in his or her aptitude, but changed in no other respects--stayed with the same parents and remained in the same school--the sophomore-to-senior achievement of that student would increase by two-thirds of a year. A similar improvement in school organization is worth half a year, in family socioeconomic status slightly less than half a year, in school resources less than one-fifth of a year. And after all these have been registered, peer pressure adds nothing.

School organization, then, has an important effect on learning. <u>All other things being equal, attending an effectively organized high school for four years is worth at least a full year of additional achievement over attendance at an ineffectively organized school</u>. In other words, two students with identically average aptitudes and families, who attend two vastly different high schools, one ineffectively organized the other effectively, will make substantially different amounts of progress over their four years: the former will accomplish three and a half grade equivalents while the latter will achieve four and a half. This is all the more impressive when it is understood that the difference attributable to organization exceeds the predicted difference in achievement between

students in the "best" and "worst" parental environments. Indeed, of all of the influences considered in this study, only student aptitude had a larger impact on learning than school organization.

Still, this is not to say that the effect of school organization works only or even mostly through the operation of a school as a total entity. The influence of organization on learning may depend on particular school practices or policies--strict discipline or substantial homework or aggressive academic tracking--that schools may follow apart from their other operations. This is important to determine, for if the impact of schooling can be traced to particular school practices, student performance might be upgraded by the relatively simple act of mandating those key practices. If, however, the impact depends on the operation of the school more generally, simple mandates will not work. To explore this issue we removed from the measure of school organization each of the conceivably discrete practices originally included in it and analyzed the effect of each on student achievement. With one exception, school practices had no significant independent influence on student gains on the tests: stricter graduation requirements, heavier homework assignments, increased emphasis on writing, and effective discipline yielded only the slightest improvements in achievement.

The exception was academic tracking, and it deserves some emphasis. Schools differ dramatically in their willingness to encourage students to take academic programs. If school effectiveness is defined by overall organizational attributes, an average student in an effective school is twice as likely to be tracked into an academic program as an average student in an ineffective school (.50 versus .25). Tracking decisions are not simply a function of student ability; they are in large measure determined by school policy. This is not to say that schools can utterly

transform their performances by becoming more aggressive with academic tracking, but one-fourth of the impact of effective schooling, by our overall measure of it, is probably due to the far greater willingness of some schools than others to challenge students intellectually. Tracking, however, is the only practice that makes a substantial difference alone. Generally speaking, the academic influence of schools--and it is sizable--works through school organization.

Sources of Effective School Organization

If schools are to be improved, it may well be necessary to transform and revitalize their organizations, which obviously places a premium on understanding how their organizations are formed and shaped. This essay cannot begin to cover that subject, for it is a deeply historical one, taking in the politicization of schools in the nineteenth century, their professionalization at the turn of this century, and their consolidation and centralization after World War II. All that can be done here is to consider what seem to be the major contributors to the differences in school organization observed in contemporary education.

A number of factors could be responsible for the organizational qualities that distinguish good schools from bad. Student bodies, for instance, might determine how high schools look as organizations. More intelligent students are perhaps easier and more rewarding to teach, conditions that would breed staff satisfaction and esprit de corps, facilitate the development of an academic mission, and encourage school authorities to give teachers the freedom to be innovative. Parental influence might also affect organization. Families that are involved in and cooperative with their schools, that agree, for example, with a school's strict disciplinary policy or strenuous study program, may

reinforce at home the efforts that teachers make at school and encourage, as a byproduct, more coherent, vigorous, and efficacious school organizations. On a more mundane level, the material conditions of schools might affect their organizational quality as well. Smaller classes, greater school expenditures, and higher salaries could improve informal organization by easing the job of teaching or increasing the rewards.

Less obviously, organization may be shaped by things more removed from day-to-day operations, in particular by the way schools are controlled. This is true, of course, in a trivial sense: most schools have outside authorities--boards of education, superintendents, district offices, higher levels of government--that directly organize them by raising and allocating budgets, specifying educational objectives, hiring certain staff, and prescribing basic operations. But outside control may also systematically affect performance by encouraging or discouraging effective school organization. In our view, this tends to occur in proportion to the amount of control outside authorities exercise over school affairs. The more control a school has over those aspects of its organization that affect its performance--the articulation of goals, the selection and management of teachers, the specification of policies--the more likely it is to exhibit the qualities that have been found to promote effectiveness.

The theoretical argument that autonomy facilitates effective school organization is too complex to develop fully here. It has many facets, each associated with an element of school organization such as leadership, personnel, or pedagogy. The theory also contains contingencies, for there are circumstances in which less school autonomy rather than more probably better promotes effectiveness. (Our data suggest that urban schools tend to benefit from strong, externally generated disciplinary policies rather than ones formulated by principals.) But the basic argument is simple to illustrate.

Consider personnel. If a school is to develop a teamlike organization, it must develop a high level of trust and mutual understanding among its teachers and between teachers and principal. A school that enjoys effective control over the composition of its staff will cultivate this climate by hiring teachers committed to its goals and by removing those who do not perform up to generally held expectations. As The Shopping Mall High School points out, for example, an important way that private school principals promote a common school purpose is by appointing only those teachers who display a "shared view of education," something public school authorities do rarely. In such a climate, principals are more willing to empower teachers, not only because they hold ultimate control over them, but because they respect them.

In a school where control over personnel is exercised largely from the outside, as in an administrative hierarchy, the climate for teamwork is less likely to develop. Staff members committed to a particular vision of schooling almost inevitably will be forced to work with those who may lack that or any other commitment. As a practical matter, appointments come to depend on objective and widely applicable criteria such as educational attainment, certification, and seniority, and not on educational philosophies or values that may suit teachers to different students, principals, and schools--to different teams. Principals will be reluctant to empower teachers they cannot fully trust, and teachers will hesitate to treat each other as full and equal colleagues. However well-intentioned, outside control of school personnel runs the risk of undermining the coherence and cooperativeness of the school as a total entity and of discouraging the delegation of critical professional discretion to teachers. Outside control over school objectives, curricula, methods, and other aspects of its operation can be expected to work similarly.

So, how important is school autonomy or the freedom from outside control? To answer that question, we analyzed The Administrator and Teacher Survey to evaluate the importance of the several competing explanations for the effectiveness of school organization--student aptitudes, family involvement, and school resources--against two measures of the influence of external authorities, one for the power of administrative superiors such as superintendents and district offices and the other for the strength of school boards. These measures were composites of the reported influence of various external authorities, and of school principals, on five categories of school policy or operation: curriculum, discipline, instructional methods, hiring, and firing. As in the analysis of student achievement, a multiple regression equation was estimated, this time to gauge the relative and total impacts of the potential explanations of organizational effectiveness. Taken together, those impacts account for an impressive 50 percent of the variance in school organization in the ATS schools. Evaluated against one another, school autonomy from administrative control turns out to be the next to the most important source of healthy school organization.

The largest estimated influence on the effectiveness of school organization is the role of parents in the school. All things being equal, schools in which parents are highly involved, can be counted on for their cooperation, and are kept fully apprised of student progress are more likely to develop effective organizations than are schools in which parents do not play these roles. In the schools that looked more like teams, the parents visited classes, conferred with teachers, and attended Parent-Teacher Association meetings more frequently; they were more likely to be contacted by the school if their children were absent from or struggling with their classes; and overall they were more predictable and less

conflictual in their dealings with the school. This support and involvement benefits schools in several ways. It increases the likelihood that school objectives will be reinforced in the home and thereby facilitates student academic progress. In that way as well as directly it enhances the feelings of efficacy and satisfaction among the school staff. It should also improve a school's relationships with outside authorities. Cooperative parental involvement is a signal to higher officials that a school may not need their intervention. And if parents participate with equal vigor in school board politics or district-level decisionmaking, it can serve as a warning to stay out. This final point is important because it suggests, more generally, that school organization is sensitive to the larger school environment.

Note, it is not the students themselves but their families that appear really to matter. Aptitude has no independent impact on organizational effectiveness: brighter students do not breed healthier schools. Much the same can be said for another influence that works at the school site rather than outside of it, namely the school's material resources. Within the range of schools observed in this study, school organizations did not improve significantly with higher salaries, smaller classes, or lower total enrollments. Instead, they prospered when the environments surrounding them improved, as parents became more supportive, and, as it turned out, external administrative control of the school became more relaxed.

The influence of administrative superiors over policy and personnel was the second most important determinant of school organization. (The influence of school boards per se made little difference.) Regardless of the quality of a school's students, parents, or resources, it was more likely to look like a team rather than a hierarchy if its principal was powerful relative to its superintendent and/or central administrative

office. In fact, so important was the influence of administrative outsiders that together with the influence of parents they explained most of what could be explained of the variation in organizational effectiveness.

This can be appreciated through two simple comparisons, each between a pair of schools that are identically average in all pertinent respects except one, the first differing in the supportiveness of the parental environment, the second in the influence of the administrative environment. If those differences represent the full range of variation observed in the survey, comparing the worst parental environment to the best and the most outside control to the least, the predicted differences in organizational effectiveness are remarkable. All things being equal, parental environments are capable of shifting a school from the 30th percentile of organizational effectiveness to the 85th, and administrative environments of boosting it from the 41st percentile to the 82nd. By these measures schools appear to be substantially and systematically products of their environments, of the support they receive from parents and the autonomy they enjoy from administrative authorities.

When Do Schools Enjoy Autonomy?

Relative school autonomy does not come easily. Public schools are responsible to local, state, and federal governments, and must expect efforts by outside authorities to hold them accountable. Private schools, of course, have fewer necessary lines of accountability, but the authorities, whether religious or secular, that ultimately oversee them will demand some degree of participation in decisions. Autonomy, then, is a matter of degree, a measure of the balance that has been struck between the need of those responsible for schools to control them and the need of

those who work in schools to operate them according to their considerable professional judgment. Since organization and performance appear to prosper when the balance favors the school and its educators, it is useful to understand the conditions that determine the amount of control school authorities exert.

We approached this issue with several expectations, the foremost being that the degree of outside intervention would depend on the quality of school performance. Schools with problems--disorder, fighting, academic failure--would attract the attention of school authorities, who would feel compelled by their positions of responsibility to take corrective actions. Schools without obvious problems would tend to be left alone. A second expectation, generated in part by what was observed about school organization, was that authoritative intervention would hinge on the degree of parental involvement. Since parents represent a sizable portion of the constituency of a school and constitute its primary clientele, their direct participation in school affairs ought to relieve some of the burdens of governance that state and local officials, school boards, and their agents would otherwise feel. Both expectations were tempered by a third, however, that the more extensive the administrative system of which a school is a part, the more likely external control, whatever its motivation, will be imposed or tightened.

These expectations seemed to cover the basic circumstances that would invite or discourage external intervention in any high school. But in earlier work we had also observed a host of organizational and environmental differences between public and private high schools, much like those differences that distinguish the high- and low-performance schools profiled in this essay. We had also devoted a good deal of thought to the differences in school control logically implied by the political and

market settings in which public and private schools were found. We had, as a result, concluded that private schools might enjoy an inherent advantage in striking a balance between effective control and adequate autonomy. Because the market provides private school authorities an additional instrument of control, they can apparently afford to delegate greater discretion to their schools and resist imposing more restrictions on them. Within externally defined limits, private schools can be permitted to test their professional judgments--tailor their organizations, operations, and offerings to the demands of their clientele--because the market can be trusted to determine whether the school has produced a desirable supply of education. Public schools cannot reasonably be given this freedom because they are monopolies within their locales, and the demand for their services does not reflect--at least not very rapidly or precisely--the judgments of parents or students about the quality of the supply. Faced with otherwise identical circumstances, then, public schools should experience more external intervention than private schools.

A regression analysis of the level of administrative control in the schools in the Administrator and Teacher Survey supported each of these expectations and revealed that together they accounted for nearly half of the variance in school autonomy. The expectation that carried the most weight was that private schools would enjoy more autonomy than public schools. In standardized statistical terms, whether a school is public or private appears to exert as much influence on the level of school control as the other factors put together.

But in more substantive terms each condition has an impressive effect, independent of the others, on school autonomy. If two schools are average in parental involvement, administrative centralization, and student performance (as measured by adjusted gains on the tests described before),

but operate in different sectors, the private school will rank near the top of the sample's distribution of administrative autonomy--the 87th percentile according to our model's prediction--while the public school will rank just below the middle, in the 47th percentile. Equally striking, though, is the change in autonomy to be expected from a shift from a more centralized to a less centralized school system, specifically a shift from an urban to a suburban setting, when all other conditions (including the probability of being public or private) are average. That hypothetical move boosts a school from the 29th percentile of the school autonomy distribution to the 69th, not quite as high a level of autonomy as in the comparable private school but as large a jump as that between the school sectors. Less impressive, but well worth noting, are the predicted impacts of parents and performance. All things being equal, a school would increase its autonomy from the 50th percentile of all schools to the 79th if its parents were to increase their involvement from the lowest level to the highest level observed in the study, and from the 51st percentile to the 71st if the achievement of its students were to register an analogous gain. While school sector nevertheless accounted for as much of our observed variation in school autonomy as the other conditions taken together, the difference that performance, parents, and administrative structure can make for a school's freedom from control is marked.

At the most general level these results suggest two conclusions directly relevant to school reform. First, there may be a viscious cycle connecting the governance and performance of public schools. Schools that have problems--disruptive students, poor test scores, parent apathy--tend to generate more demands for remedial action, which responsible outside authorities respond to in the manner closest to hand: imposing new rules governing school practice and carefully monitoring compliance with them.

Some of these requirements, such as ones that enforce discipline and maintain a requisite level of order, may well prove effective. But the restriction of school autonomy has the potential to backfire. Principals may lose some of their power to lead and teachers some of their discretion to work as professionals. Organizational effectiveness may consequently deteriorate and with it the performance of students. The deterioration may then stimulate another round of demands for action, increased school restrictions, decreased performance, and rising public dissatisfaction. This circular syndrome is apparently aggravated in large urban school systems where the possibility of using less prescriptive means of improving performance is nearly precluded by the existing apparatus of control and the practical difficulty of accomplishing anything informally.

The second conclusion is that unlike public schools where autonomy appears to depend on an absence of compelling reasons for external intervention, private schools appear to provide autonomy as a matter of course. Almost certainly the most important reason is the availability of an additional mechanism of social control. Public schools are controlled almost exclusively through regulation and monitoring because alternatives are mostly precluded by their monopoly status within their political jurisdictions. Private schools, however, may also be controlled by the market: schools offer an educational product and parents and students register their approval by consuming or rejecting it. Under these circumstances, outside authorities such as bishops or boards of trustees do not need to pursue their objectives through extensive regulation and reporting. They can determine whether their wishes are being fulfilled by observing the success of the school in keeping its clientele. Private school authorities can provide their schools with autonomy without losing control. Public school authorities cannot. Their schools, acquiring their

clienteles by assignment and their resources by appropriation, lack important incentives to adapt their organizations to satisfy efficiently the demands that parents and communities make of them. As a result, public school officials can only provide schools autonomy in exchange for carefully monitored systems of accountability--which, of course, threaten to be prescriptive, restrictive, and counterproductive.

Why the Current Wave of School Reforms Will Fail

For all that has been said and done about school improvement in the 1980s, and there has been a remarkable amount of both, school reform has thus far involved only those measures that according to tradition are the most politically and administratively acceptable. The official assault on educational mediocrity has really had but two thrusts. The first is to crack down on student underachievement. State legislatures in particular, but state and district school officials as well, have declared existing levels of achievement intolerable and have mandated improvements. Students in most states are being forced to take more prescribed courses and to pass periodic standardized tests to receive a high school diploma. Schools are commonly being required to devote more time to instruction, to strengthen their discipline, to adhere to more detailed and rigid curricula, to deny extracurricular participation to failing students, and to implement special "academic enrichment" programs. To reinforce this thrust, reformers have put together one other, a push to "professionalize" teaching. A majority of states have consequently toughened their teacher certification processes, instituted competency testing, developed more extensive teacher evaluation systems, and, partly in exchange, provided across-the-board raises and merit increases.

There is little reason to believe that these actions, forceful though they are, will make much headway in boosting student achievement, and there is considerable reason to believe they will fail. To begin with, there is scant evidence that any of the aspects of schooling that are affected directly by the reforms have had an impact on student achievement, at least in a straightforward way. To be sure, American schools have lost some of their academic focus over the years and have probably lost some of their more talented teachers as well. But there is no evidence that tougher requirements for students or teachers accounts independently for the superiority of some schools over others. Our research suggests that in and of themselves stiffer graduation requirements are unimportant, but that as part of an all-encompassing, school effort to excel academically they may be vital. Teachers are likewise integral to any school's success or failure, and there should be no quarrel with efforts such as examinations to identify and release the incompetent ones. But teacher effectiveness does not appear to pivot upon professional credentials, as the research of others has shown repeatedly,[7] or upon compensation. This is not to say that teachers do not deserve higher pay for their socially important work or that higher pay will not eventually attract better people. But teacher compensation is not a significant explanation of the disparity between high- and low-performance schools today. As best we can tell, the kinds of changes that school reforms have so far made are not the sort that produce improvements in performance.

Indeed, they may do the opposite. Most of the current reforms are regulatory in nature. They impose higher standards and establish monitoring, reporting, and accountability systems to try to ensure that

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7. For a comprehensive review of this work, there is none better than Eric Hanushek's "The Economics of Schooling," cited in note 4.

they are met. The new edicts also emanate mainly from state legislatures far removed from the schools. As the reforms are implemented, chances are they will become more detailed, prescriptive, and per force restrictive: laws are seldom self-implementing, and bureaucrats in state education agencies and local district offices will need to specify the procedures for following them. In practice, this means that the curricular and instructional steps that educators must follow will become less subject to choice and the criteria for judging their performance more closely tied to following them. The problem with this is that the losses of autonomy that these practices entail are a threat to the classroom and to the school. Teachers lose the ability to accommodate much of the diversity that they encounter in their students, and principals lose the flexibility to organize a trully collegial and professional team.

Education administrators are not ignorant of this risk. They understand the importance of professional autonomy, and they have learned through the implementation of countless education improvement programs since the mid-1960s that autonomy is easily endangered. But they are trapped. As long as the general public or interest groups such as the poor, the handicapped, or, especially today, business and industry, demand results, administrators will be hard pressed by politicians in state government and on local school boards to come up with some. Initially they will work to provide evidence of results without involving themselves deeply in school affairs. But the interest groups that monitor policy implementation are not easy to satisfy, and when they are not, schools may suffer truly consequential losses of autonomy. Federal programs to aid the poor, most notably Title I (now Chapter I), have had this negative side effect. As schools struggled to demonstrate to government auditors that poor children were really getting "something extra" from program money,

they discovered that the simplest way to pass official muster was to create "pull-out" programs, a dubious approach to remediation that most educators now regard as unacceptably stigmatizing to students removed from regular classes. But, without an effective system of accountability, public schools lack sufficient incentives to follow mandates, and their authorities have good reason to fear schools will respond only superficially. We have seen some evidence of this in those schools in our study that are carrying out school improvement programs (one-third according to the principals): less than half of the teachers in those schools are aware that a program exists, let alone have any knowledge of its details.

No matter how the current reforms are implemented, however, the most compelling reason for pessimism about their effectiveness is their conception: they allow little scope for improving those qualities of school organization that, in our view, are crucial to school performance. Schools have not been granted more autonomy; they have had it taken away. The goals that schools have been asked to fulfill have not been clarified or reduced in number but expanded to include the burden of increasing our technological sophistication. Math and computer science have therefore become higher priorities, but other priorities have not been displaced: support for traditional programs of study rooted in the liberal arts remains quite strong, and nothing has eroded the importance of alternative, vocationally oriented programs for the less academically inclined. Everything, in effect, has become a top priority. Reformers also want very much to improve the quality of school staffs, yet they have not given schools the flexibility to build their own. Improvement is being pursued teacher by teacher through testing, credentialling, and evaluation, and not through efforts to foster consensus, collegiality, or collective

responsibility. Principals are exhorted to act as stronger leaders and teachers to behave more like professionals, but neither have been given the freedom or responsibility to perform accordingly. There is little reason to think, therefore, that schools will develop a sense of mission, acquire strong direction, benefit from increased levels of cooperation and commitment, or, in sum, become the kinds of organizations that superior academic performance seems to demand.

Unfortunately, there is also little reason, at least under current conditions, to expect concepts of school reform themselves to be reformed. As long as public education is governed and administered as it is, politicians and administrators will not grant schools substantial autonomy. Schools cannot and should not be given greater control over their educational enterprises unless they can be held accountable for their performances. Accountability, however, is a very cumbersome, intrusive, and potentially counterproductive mandate to fulfill when it must be accomplished through performance standards and regular monitoring. For example, if schools were given latitude to pursue academic excellence, they would probably need to be held accountable for their efforts through the use of standardized tests, a procedure that could cause learning to degenerate into an unacceptably narrow pursuit of high test scores instead of a broader effort to cultivate the various qualities of the educated mind. To the extent that reformers reject school autonomy to avoid the frustrations and unintended consequences of accountability systems, they are therefore to be applauded.

But decisionmakers have other less laudable reasons for hesitating to decontrol public schools. Education administrators have a major stake--their jobs--in public education as it is currently organized, and hold deep-seated professional beliefs that support the system, or at least its

basic architecture. Teachers' unions, for all their genuine concern about autonomy in the classroom, are reluctant to embrace a system that might offer more independence but would probably threaten tenure and seniority. Politicians have less invested personally and are often willing to entertain proposals to change the existing form of public education, but their positions of ultimate responsibility make them powerful protectors of the status quo too: if school reforms, radical or otherwise, do not succeed quickly, politicians become vulnerable to demands from the public for corrective action and are likely to respond by reimposing the very sorts of controls that reform aimed to remove. Even if the interests that support the current system could be overcome, then, real reform might be undone by the forces that led public education to be extensively controlled in the first place.

Real improvement in public education therefore presents a dilemma. The reforms that are most consistent with current arrangements for school governance and administration are unlikely to foster the organizational and professional climates most conducive to student achievement. But the kinds of reforms that might well bring about better school conditions are inconsistent with existing controls and therefore unlikely to be adopted or adequately carried out. What are these more promising reforms? In essence they are plans to cultivate in schools the various qualities of organizational effectiveness, from stronger leadership to more professional teaching, by increasing school autonomy. They also recognize that perhaps the only way to increase autonomy without either sacrificing accountability or having it degenerate into excessive regulation is to rely less on relationships of authority and more on the signals of a market. That is where they run into trouble. Reforms that would transform the controls over schools, from political and administrative arrangements to those of

the market, would shift much of the power over public education from elected and appointed government officials outside of schools to the professionals within the schools and to their essential clientele, students and their parents.

All of this may mean that fundamental reform will not be adopted and that public schools will somehow muddle through, squeezing tolerable improvements out of tougher requirements, increased compensation, and other modifications of the existing system. But temporizing efforts may prove more frustrating than satisfying--and continued pressure for permanent, fulfilling improvements might make basic changes of school governance feasible. There are signs that this may already be happening. In 1986, the Carnegie Forum, a prestigious panel of education professionals and researchers, called for radical changes in school accountability systems to increase the discretion of principals and teachers. A group of elected officials critical to the future of education reform, the National Governors Association, called for substantial increases in school autonomy. And for several years now school districts throughout the nation have been experimenting with various reforms that mimic economic markets.

If the current wave of school reform does fail to produce improvement, and if real alternatives are considered, a number of options ought to be taken seriously--among them, magnet schools, open enrollment plans, and full or partial voucher systems. In one way or another, each provides students and their parents more choice among schools and more reason to become cooperatively involved in them. Each also encourages schools to organize for greater effectiveness by establishing competition for students and resources and by increasing school autonomy. There are advantages and disadvantages associated with each, and an adequate justification for recommending any one is beyond the scope of this essay. But the

alternatives share a distinct advantage over the education reforms that the states are now pursuing: they are justified by basic premises about school performance that, at least if our research is on target, are more nearly correct. They also indicate a way around the dilemma. They offer the public the means to improve their schools without losing control over them. And control, afterall, may be the only credible justification for the system that now stymies school performance.